

**STATE OF IOWA
DEPARTMENT OF COMMERCE
IOWA UTILITIES BOARD**

IN RE:)	
ITC MIDWEST LLC)	DOCKET NO. E-22386
DAIRYLAND POWER COOPERATIVE)	

INTERVENOR CHRIS KLOPP'S PREHEARING BRIEF

I. INTRODUCTION

As a citizen intervenor, Ms. Klopp seeks to insure that the record for IUB Docket E-22386 provides adequate documentation and diverse viewpoints and therefore fully informs the IUB in their decision-making process. Ms. Klopp believes that the public perspective is important in this decision and should not be muted. In these times of a rapidly changing energy landscape, it is more important than ever to consider large investments in infrastructure. Infrastructure adds debt to ratepayer electric bills, so it is vital these public investments not become stranded assets. In addition to debt, the citizens of Iowa will have to live with impacts from the choices that are made today. Let us leave a bright future for those who come after us.

The Petitioners have failed to provide crucial information, needed to fully evaluate all of the impacts of this project, including cost. Petitioner claims rely solely on MISO analysis, which is not specific to the project or even to the State of Iowa. They are comfortable leaving the IUB with only information pertaining to the 17 MVP lines collectively. Even if MISO analysis for these 17 projects as a whole was appropriate, the essential features and assumptions of this analysis has not been provided to the IUB for consideration. In science, one discovers how important the underlying assumptions are to the outcome of any analysis. Even more disconcerting is their response to concerns about missing information.

II. ECONOMICS: Would the Project Cost Iowa Ratepayers or benefit them?

Evaluation of whether this project would end up costing the Public, is central to this case. As expressed by the interests of Objectors and the Dubuque County resolution,¹ ratepayers want to know if their rates would go up, as they have been.² As transmission expansion has been occurring over the past 10 years, electric rates in Iowa have been increasing. It is reasonable for the Public to ask “What evidence is there, to insure that this project would not increase rates even more?” The Petitioners have not submitted any economic analysis of the project. If the Petitioners believed this project had been proven to be economically beneficial, doesn’t it make sense that they would want to show the IUB data demonstrating this? Instead of doing this, the Petitioners have chosen to point to MISO estimates of the benefit cost ratios for an entire portfolio of 17 MVP transmission lines. Mr. Eddy states “MISO analyses confirm that MVP Portfolio, including the Project, will provide benefits in excess of costs.”³ yet provides no MISO analysis, data, or explanation of the underlying assumptions that were relied upon to calculate these benefit cost ratios.

The onus of proof for the Project’s economic viability rests squarely with the Petitioners to follow up on the Dubuque County Resolution and requests by Objectors:

“Dubuque County requests clear, easy to read comparisons of average 28 residential commercial and industrial utility bills for 5, 10 and 20 years with and without the proposed high-voltage transmission facility in-service.”

Ms. Klopp asked the Petitioners the following questions in discovery:⁴

¹ Klopp-Reply-Exhibit-15, Dubuque County Resolution #18-233

² Klopp-Klopp-Reply-14

³ ITC Midwest Eddy Rebuttal – Page 9 of 11

⁴ Klopp-Reply-Exhibit-2, page 9, Data Request 5A&B

1

(A) **Without the CHC Project being built, Base Case:**

i. **Residential Ratepayer:** The Base Case is the projected annual energy cost for an average residential customer. Take the Iowa 2017 average kWh consumption for the residential customer class, calculate usage in future years by sequentially increasing each following year by the 2007-2017 historical growth rate. To estimate the annual energy costs in 2026, 2031 and 2041, multiply each year's usage by the kWh rate. The cost per kWh and the number of customers can be inflated annually as well.

(B) **With the CHC Project In-Service under the *Existing Fleet* future scenario:**

iv. **Residential Ratepayer:** To compare the economic impact of the CHC Project on an average Iowa residential customer under this future, add the adjusted benefit from the MISO data set to the Annual Energy Costs for years 2026, 2031 and 2041. To get the Annual Energy Costs, use the Iowa 2017 average annual kWh usage for the residential customer class and sequentially increase this usage **0.4% per year**. Multiply each year's total kWh usage by the 2017 residential cost per kWh. The cost per kWh and the number of customers can be inflated annually as well.

3

4 To date, ITC-M (ITC-Midwest) has not provided a response to these Data Requests. ITCM's did
 5 state following objections: "ITC Midwest further objects that the request is vague and ambiguous
 6 as to whose electric bills are requested to be calculated, and also is vague and ambiguous as to
 7 the term "easy to understand," and "ITC Midwest objects to the request because it does not have
 8 end-user retail electric customers and does not have access to the information needed to estimate
 9 the impact of a particular transmission project on individual, end-use retail customers."⁵ DPC
 10 did not provide a response to these Data Requests. DPC did state the following objections:
 11 "DPC further objects that the request is vague and ambiguous as to whose electric bills are
 12 requested to be calculated, and also is vague and ambiguous as to the term "easy to understand,"
 13 and "the data relied on in this Request does not exist." So, both ITCM and DPC claim no
 14 responsibility for providing answers to the Dubuque County or Objectors concerns. Ms. Klopp
 15 also sought out information on overall Net [Economic] Benefits for the project to Iowa:

1 ⁵ Klopp-Reply-Exhibit-2, page 11, Data Request 5

1 ”

Data Request No 34: In regard to potential negative impacts on Iowa and regional electric customers over coming decades and MISO’s 1:1 benefit to cost economic requirement to protect against this harmful outcome, please provide the following information for evaluation by intervenors and Iowa regional electric ratepayers:

(A) For ITC and DPC collectively: Please conduct and provide economic analysis for the CHC Project using the below factors to produce estimated Net Economic Benefits for Iowa electric customers for the proposed CHC Project over 40 years under MISO’s Existing Fleet, Policy Regulation and Advanced Alternatives Technology future scenarios. Deduct the cost of the project from the benefits to arrive at the estimated Net Economic Benefits.

Energy Cost Savings
Capacity Loss Savings
Insurance Value
Avoided Reliability Benefits
Asset Renewal Benefits

Cost of Project to Iowa customers

3 ITCM did not provide a response to these Data Requests. ITCM did state the following
4 objection: “ITC Midwest also objects to the request because it is a request to create new
5 information that is not presently in ITC Midwest’s possession or control.”⁶ DPC did not provide
6 a response to these Data Requests. DPC did state the following objection: “DPC also objects to
7 the Requests because they are requests to create new information that is not presently in DPC’s
8 possession or control.” So, both ITCM and DPC claim no responsibility for providing economic
9 analysis of the project for review by the IUB, Parties and the Public.

10 Another way to get at the potential costs or benefits to ratepayers is to look at how the
11 currently in-service MVP projects have effected electric rates. Neither the Petitioners nor MISO
12 have provided this information. When Ms. Klopp asked MISO in discovery to conduct an
13 economic analysis of the delivered economic savings from lines already in service, MISO
14 replied, “It is infeasible to calculate Congestion and Fuel Cost Savings based on actual operating
15 history because impacts solely due to the addition of a project cannot be isolated.”⁷ It’s hard to
16 accept that useful estimates could not be made with monetized market transactions recorded over

1 6Klopp-Reply-Exhibit-2, page 64, Data Request 34A

2 7 Klopp-Reply-Exhibit-18, page 8, Data Request 6D

hundreds of nodes every few minutes. Mr. Ellis states “With only four of the 17 MVPs presently in service, no definitive conclusions could be made as a result of this analysis.”⁸ To this I would suggest, if one uses a plan or a model to predict a future outcome and then has no way to assess if it has actually worked – there is a problem. No business would ever operate this way (for very long), unless it had a guaranteed captive audience for its product (like public utilities do).

Ms. Klopp would like to respond to some of the Rebuttal testimony that referenced the WI CHC proceeding. First a statement made by Mr. Eddy “Ms. Klopp attempts to rely on testimony from PSCW staff electrical engineer, Alexander Vedvik, to challenge the economic need for the Project when in fact the PSCW rejected Mr. Vedvik’s analysis. On pages 25 and 31, for example, she quotes an excerpt from Mr. Vedvik’s testimony indicating the Project may not provide net economic benefit. These excerpts are significantly misleading by omission because Ms. Klopp does not disclose the PSCW’s conclusion.”⁹ First, Mr. Eddy misrepresents Ms. Klopp’s testimony.¹⁰ Relative to Mr. Eddy’s contention, Ms. Klopp would argue that the PSCW Decision is irrelevant to the Iowa proceeding. Mr. Eddy apparently believes that the IUB does not deserve to have documentation of economic analysis or any other pertinent analyses upon which to make their determination as to whether this project is in the interest of the public. He also insinuates that the IUB should not have the option of considering WI CHC proceeding testimony for themselves, in lieu of what the Petitioners have not provided, and should be satisfied with just taking the PSCW decision, no questions asked. Beyond that, it is absurd to suggest that, a review of the testimony from the WI CHC proceeding, undertaken by 10¹¹ different state regulatory bodies would not provide 10 different opinions on that testimony. The record is not defined by the decision!

While Mr. Ellis criticizes Ms. Klopp, saying she “mischaracterizes the testimony that was previously submitted and ignores other testimony.”¹² This is precisely what Mr. Ellis has done when discussing PSCW staff analyses in his rebuttal. Mr. Ellis speaks about the importance

⁸ MISO-Ellis-Direct-Exhibit 3- page 9

⁹ ITC Midwest Eddy Rebuttal – Page 5 of 11

¹⁰ On page 25 of her Reply testimony, Ms. Klopp was not questioning the need of the project, but was speaking to the question of whether there is evidence that not approving the CHC Project would have negative economic impact on ratepayers in portions of the MISO footprint, including Iowa.

¹¹ The use of 10 is just as an example.

¹² Rebuttal-MISO-Ellis-11

1 of maintaining balance by removing one RRF unit if another has been added and chides the
2 PSCW staff for not making these adjustments.¹³ Mr. Ellis continues "The targeted updates
3 described by PSCW Staff in the Wisconsin proceeding, while on the surface created to update the
4 depiction of the expected state of the Bulk Electric System ("BES"), introduced inconsistencies
5 and biases into the MTEP assumption set and created scenarios that were less representative of
6 expected conditions."¹⁴ Ms. Klopp would like to give some examples of information that Mr.
7 Ellis omitted, which are pertinent to his conclusions with respect to the PSCW PROMOD
8 analysis. PSCW staff engineer, Dr. Grant reviewed the sources of generation included in the
9 Applicants models. Staff identified "The concerns raised by Commission staff noted
10 inconsistencies within the state of Wisconsin for specific generators among years and futures,
11 including supposed retirements of electrical generators about which Commission staff had no
12 information or inclusion in the model of generators known to have retired. Moreover,
13 Commission staff expressed concern about the inclusion of the RRF units that may neither
14 currently exist nor be in the interconnection queue."¹⁵ In addition to these concerns, the
15 Applicants had not included renewable projects approved by the PSCW and declined to add wind
16 generation the Applicants claimed would benefit from the CHC project. There was a litany of
17 other problems with the Applicants economic analysis documented by the PSCW staff.

18
19 To return to Mr. Ellis' concern that PSCW staff analysis introduced inconsistencies and
20 biases, Ms. Klopp would like to point out that several of the expert witnesses in the WI CHC
21 proceeding pointed to flaws in the Applicants modeling that biased their results in favor of the
22 project.¹⁶ What is the point of all this? The Petitioners and supporting parties (including MISO)
23 represent testimony from the CHC proceeding in WI selectively and make accusations that apply
24 equally to how they portray the facts in their testimony. The petitioners have not provided net
25 benefit economic analysis of the Project to this proceeding. Any information that has bearing on
26 this issue should be available to the IUB for their consideration and they should have the
27 opportunity to judge the usefulness of it, for themselves.

1 13 "To maintain this balance, explicit updates made after initial model development need to also consider
2 modifications to the resource forecast/RRF units- e.g. if an explicit unit is added, an equivalent RRF unit should be
3 removed or explicit updates should be made to all impacted geographic areas to maintain a consistent assumption
4 set. These adjustments were not performed in PSCW Staff's analyses."

5 14 Rebuttal-MISO-Ellis-6

6 15 Klopp-Reply-Exhibit-125, page 3 of 18, Initial Brief-Klopp

7 16 Klopp-Reply-Exhibit-125, page 2 through 8 of 18

1 **III. ENVIRONMENT: Cost-Effective CO2 Emission Reduction Accountability.**
2

3 Ms. Klopp will address statements that have not been rebutted. Parties did not question
4 MS Klopp's observation that MISO does not adequately track CO2 emissions regionally or at
5 state or local levels. Thus far, Ms. Klopp has not been challenged with regard to her contention
6 that MISO and the Petitioners have not examined the CO2 reduction potential of the CHC
7 project.

8
9 Ms. Klopp's annual CO2 reduction estimates for the CHC Project for Iowa, based on
10 MISO's regional estimates¹⁷ remain uncontested. The data suggested a reduction of only 2.6% -
11 4% (in MISO's study for 2031). The significance of the amount has not been debated.

12
13 No questions have been raised with the Potomac Economics' finding that wind power
14 averaged 8% of MISO electricity use in 2018 and that this low percentage was preceded by the
15 addition of many costly expansion transmission lines from 2013 to 2017.

16
17 There have been no citations of a MISO MTEP future scenario based on accelerated
18 investments in energy efficiency and load management to produce negative load growth. Mr.
19 Goggin and Mr. Craven played down the potential of energy efficiency to compete with need for
20 more transmission.

21
22 There were no exceptions to Ms. Klopp's observation that MISO has not done planning
23 based on aggressive, "local first," implementation of distributed generation+solar, investments in
24 energy efficiency, linked battery storage and load management.

25
26 Mr. Goggin was the only party that questioned the ability of Non-Transmission
27 Alternatives to reduce more CO2 emissions over time than the CHC Project. His argument is
28 discussed below.

29
1

17 Klopp-Reply-Exhibit-22 at p. 29, Table 14

1 No parties discredited the US Department of Energy's analysis that Energy Efficiency has
2 been the fastest and most cost-effective method for reducing CO2 since 2005¹⁸ except for Mr.
3 Goggin who did not provide evidence. Mr. Goggin provided CO2 reduction estimates for the
4 Project which are discussed below.

5
6 In defense of the CHC Project being needed to deliver full energy output of wind
7 generations within and outside the State of Iowa, Mr. Eddy cited large numbers of "conditional"
8 wind projects in the MISO queue. Mr. Goggin cited numbers from MISO 2012 planning that he
9 finds convincing. Neither commented on the need for basic data in the docket like the amount of
10 wind power that is being exported from Iowa today.

11
12 Ms. Klopp will now address rebuttal claims. The Petitioners and supporting parties are
13 resting their primary need for the project on the environmental benefits they believe would come
14 from building from 500 to 19,000 MW¹⁹ of new wind power plants. It is very difficult to
15 determine from the swirl of diverse numbers being distributed how much of this new generation
16 would be located in Iowa.

17
18 The Petitioners reason, that the large number of power plants being designated as
19 "conditional" on the project are an indication of need for the project. However, this widespread
20 commonality may also be signaling that an increasing number of new and sought remote power
21 plants are facing considerable economic challenges to become and to remain economically
22 viable. A cover letter for the MISO DPP August 2017 Wisconsin Area Phase 3 report,²⁰ shows
23 that 8 power plants projects (242 MW of wind and 800 MW of solar), conditional on CHC, "face
24 estimated interconnection costs totaling \$70.8M.6" and these costs may be on the lower side
25 because of proximity and accessibility to the proposed Hill-Valley 138/345 kV Substation at
26 Montfort. The letter states that all eight facilities will be subject to quarterly operating limit
27 studies and that if the CHC Project is not built MISO would need to restudy all of these
28 generators. The letter warns that it is possible that any or all of the power plants could be subject

1 18 Klopp-Reply-Exhibit-26, Table 12 and Klopp-Reply-Exhibit-152 for US Department of Energy Analysis
2 19 CEI-Rebuttal-Goggin-5: "In Iowa, Minnesota, South Dakota, and North Dakota. . .10,897 MW of new wind
3 expected to be deployed in the near future, and under MISO's "Accelerated Alternative Technology's future. . .
4 19,200 MW by 2031.
5 20 ITC Midwest Eddy Direct Exhibit 5

1 to additional interconnection costs.

2
3 There seem to be a number of factors bringing cost and profit margin sensitivities into
4 play. The project itself experienced increased economic challenges when the PSCW staff
5 modeled new generation at the Hill-Valley substation and later in eastern Wisconsin²¹. Even with
6 the assistance of PROMOD to assess economic factors in the Wisconsin review, the
7 incorporation of new power plants with the CHC Project seemed to be complexly linked. Trying
8 to make these judgements in Iowa without economic analysis tools, today, may be riskier than it
9 was in the past.

10
11 Mr Eddy has asserted that Iowa's changing fuel mix from 2008 to 2018 compensates for
12 the persistent amount of fossil fuel generation in the state's generation mix. Do you agree? Ms.
13 Klopp appreciates Mr. Eddy bringing in factors like the amount of coal burned over time and the
14 rate of renewable energy introduction into Iowa. These seem to be secondary factors compared
15 to measuring CO2 emissions over time. Perhaps for this reason, the environmental
16 accountability set in Dubuque County's Resolution is a comparison of CO2 emission impacts
17 with and without the CHC Project in service.²²

18
19 According to EIA data,²³ Iowa carbon dioxide emissions from fossil fuel generation in
20 Iowa were 91.1 million metric tons in 2008 and 76.3 million metric tons in 2017, a decline of
21 16% or a rate of about -1.9% per year. MISO estimates the current trend of CO2 emission
22 decline at about -0.8% per year²⁴. While 1.9% is significantly higher, CO2 reduction in Iowa
23 might be much faster if the state could address industrial energy use increasing at the fast pace of
24 2.2% per year

25
26 Similarly, Mr. Goggin criticizes Ms. Klopp for using an estimate of fossil fuel power
27 plant capacity factors and not evaluating power plant fuel consumption²⁵ regarding her

1 21 Klopp-Prehearing-Exhibit-165 See Press Release. In October, 2019, Alliant (Wisconsin) announced they will be
2 building 1000 MW of solar in Wisconsin by 2023

3 22 Klopp-Reply-Exhibit-15 page 2

4 23 EIA, <https://www.eia.gov/environment/emissions/state/excel/iowa.xlsx>

5 24 Klopp-Reply-Exhibit-22, page 37 of 45, 3.2. See dashed line, CO2 Output by Future

25 CEI-Rebuttal-Goggin-1

1 observation that Iowa's fossil fuel power plant capability remained at 2008 levels in 2017 despite
2 significant amounts of remote wind generation being phased in. Ms. Klopp senses that using a
3 generic fossil fuel power plant capacity factor different from 0.85 and taking into consideration
4 power plant fuel consumption would not change the persistence of the fossil fuel generation
5 capability in the Iowa's fuel mix over time.

6
7 Has Iowa wind energy been *efficient* at displacing Iowa CO2 overtime? With about 10
8 years of progress to evaluate, Ms. Klopp observes that accounting for this would definitely
9 inform the case.

10
11 Mr. Goggin Observes that MISO's Service Territory Expanded in 2013 throwing off
12 Wind Generation Percentages Monitored by Potomac Economics. The years 2013-2017 were
13 used for discovery consistency, with knowledge of the MISO expansion. A web search showed
14 it as 2013. Another web search shows the formal expansion occurred in December, late in the
15 year. Ms. Klopp agrees with Mr. Goggin that the expansion would influence the percentage.
16 The 2014 Potomac Economics report is lower than for 2013 at 6%.²⁶ Ms. Klopp confirms that
17 Potomac's percentage remains at 8% for both 2017 and 2018²⁷.

18
19 Ms. Klopp's overall observation is that 8% leaves a lot of room for fossil fuel generation
20 and associated CO2 emissions in our outlets. With a reduction rate²⁸ half as fast as Energy
21 Efficiency and DERS, remote renewable power plant development is more challenged at
22 reducing CO2. Wind generation, in particular, tends to promote natural gas generation.

23
24 Mr. Goggin has provided more information about his CO2 reduction estimate for the
25 CHC Project of 4.09 million short tons per year^{29 30} A number key factors remain unexplained.³¹

1 26 Potomac Economics 2014 MISO State of the Market Report on p. 5 Table 1: Capacity, Energy Output and Price-
2 Setting by Fuel Type 2013 and 2014

3 27 Potomac Economics 2018 MISO State of the Market Report on p. 5 Table 1: Capacity, Energy Output and Price-
4 Setting by Fuel Type 2017 and 2018

5 28 Klopp-Reply-Exhibit-152

6 29 CEI-Rebuttal-Goggin-9,10

7 30 Klopp-Prehearing-Brief-Exhibit-163 Response to Discovery

8 31 Missing factors: Greater detail on wind generation rating, the geographic location of the wind generation,
9 market affirmed evidence that 1200 MW of utility scale, location-specified, enabled wind generation can displace an
10 equal amount of location-specified, fossil fuel generation, the geographic area where the CO2 is reduced (public
11 interests specified Iowa CO2 emission reductions) and calculations showing how the figure of 233,239,510 MWH

To move the discussion forward, Ms. Klopp has made some corrections in his MWH factor which Mr. Goggin can respond to. Correcting for 1200 MW of generation, Mr. Goggin's methodology seems to suggest the project would reduce about 70,063 short tons of CO2 emissions per year.³² This amount is 13 times less than the 912,163 short tons of avoided CO2 per year computed for Wisconsin by Bill Powers for his NTA³³ based on energy efficiency, distributed solar, aggregated distributed battery storage and municipal utility solar+ storage facilities.³⁴

Ms. Klopp's corrected value using Mr. Goggin's methodology³⁵, however, is on par with the 180,000 short tons per year that Dr. Anne Smith calculated for the CHC project under the Public Policy Future for reductions in three states: Iowa, Wisconsin and Minnesota.

Another variation of Mr. Goggin's methodology using 1200 MW of unrestricted capacity seems to displace about 184,376 short tons per year. This amount is almost identical with Dr. Anne Smith's estimate for the CHC case in Wisconsin. Ms. Klopp notes that Powers' NTA, which avoids emissions, "behind meter," still reduces about 5 times the amount of CO2 compared to Goggin's larger reduction. Using Focus on Energy incentives in large part, Mr. Powers' NTA has an estimated cost of \$177 million, an amount much less than Goggin's estimated 1200 MW of remote renewal generation plus the \$628³⁶ million dollar CHC Project.

IV. RELIABILITY: Enhancing the Existing Transmission System

Ms. Klopp will address statements that have not been rebutted. Petitioners and supporting parties have not contested that MISO is planning enhancements to further expand Midwest load

for AVERT input was derived from 1200 MW. 1200 MW of wind generation with a .38 capacity factor running (maximally and unrealistically) 24 hours per day and 365 days a year appears to compute to 3,994,560 MWH. 1200 MW of unrestricted capacity (maximally and unrealistically) operating 24 hours a day and 365 days a year appears to compute to 10,512,000 MWH.

32 Klopp-Prehearing-Exhibit-164 (.xls Worksheet)

33 Klopp-Reply-Exhibit, Page 9-11

34 Klopp-Reply-Exhibit-155 Page 15

35Klopp-Prehearing-Exhibit-164– CHC vs. NTA CO2 Worksheet

36 Klopp-Reply-Exhibit-159 at p. 6 PSCW Staff, Total Estimated Present Value MVP Allocation, \$628 million

1 management capabilities through the development of the Load Modifying Resource (LMR) and
2 that this resource stands to increase reliability without adding new transmission lines.

3 Consistent with the general position of the Iowa Office of Consumer Advocate, no parties
4 expressed concerns about power outages in Iowa which were considerably below the national
5 average in 2018.

6 Petitioners and supporting parties have not stated exception with NERC's forecast of
7 MISO load growth forecast at an annual rate that is one-third to one-half of what MISO claims
8 and Petitioners adopt in MTEP17 assumptions for the CHC Project (0.25% per year compared to
9 0.5% per year and 0.6% per year for PR, ATT futures).

10
11 Parties have stated no exception to Ms. Klopp's observation that two lists³⁷ of potential
12 reliability factors which MISO developed, not just for the CHC Project, but for the combined
13 effects of 17 transmission lines have incongruities with the Petitioners' Reliability project
14 listings. For example, Petitioners do not state there are reliability issues in Iowa associated with
15 the CHC project other than the Turkey River-Stoneman 161 kV line crossing at the Mississippi
16 River located very near to where the CHC Project would cross.

17
18 Parties raise no specific technical questions about cited PSCW staff's assessment of the
19 aging Turkey River-Stoneman 161 kV and Stoneman-Nelson Dewey 161 kV lines that currently
20 support much of the west to east power transfer between Iowa and Wisconsin. Parties have not
21 objected to the observation that these transmission facilities are two of the three reliability/asset
22 renewal projects that the petitioners list in their application materials. No parties in this case, to
23 date, have commented on the striking difference in impacts on ratepayers in Iowa, Wisconsin and
24 other states between a \$900,000 Low Voltage Alternative and the CHC Project at \$628 million.

25
26 While BWARA is only briefly mentioned in the 111 page PSCW decision, Petitioners,
27 MISO and Mr. Goggin have rested their address of a low-voltage transmission alternative to the
28 CHC project, BWARA, on a single citation from the WPSC CHC Project decision³⁸. These
29 parties have not have applied their technical expertise to challenge the merits of the Alternative

1 37Klopp-Reply-Exhibit-1 at p. 22 and Klopp-Prehearing-Exhibit-167, (xls spreadsheet, See "Avoided Investment
2 Split" Tab; "TRK RIV5-STONEMAN"

3 38 ITC Midwest Eddy Rebuttal at p.5, starting at line 17

on reliability, economic or environmental grounds.

No parties challenged Ms. Klopp's observation that MISO inserted the CHC Project into DPP planning as if the CHC Project was already a part transmission system. This assumption is encouraging interpretations that are confusing and in some cases causing persons to assume reliability issues when they are being induced.

On the topic of ITCM system summer peak dropping at the rate of 1.4% per year from 2013 to 2017, Mr. Eddy observes, "ITC Midwest's system often experiences highest demands in off-peak periods when wind output is high."³⁹ This observation is not borne out in the historical data ITCM submitted to FERC⁴⁰ as shown in the below table.

ITCM Peak Demand by Month and Summer Peak 2013-2017

	April Peak	Nov. Peak	Summer Peak
Average	-30%	-22%	100%
Year	April Peak	Nov. Peak	Summer Peak
2013	2,451	2,713	3,573
2014	2,489	2,910	3,310
2015	2,365	2,495	3,457
2016	2,425	2,508	3,479
2017	2,363	2,727	3,387
Average	2,419	2,671	3,441

Mr. Eddy's observation does not address the reason that summer peak demand on ITCM's system has been decreasing.

While Mr. Ellis emphasizes cost awareness in reliability decisions in his rebuttal, MISO's reliability standard for the CHC Project sets a very low bar requiring the line to "address at least one Transmission Issue associated with a *projected* violation of a NERC or Regional Entity

³⁹ITC Midwest Eddy Rebuttal, Page 7

⁴⁰Klopp-Reply-Exhibits-116 page 1 of 5

standard.”⁴¹ The process of identifying “weak” lines in the system, does not necessarily mean those lines will get earlier attention. This seems to be case with PSCW Staff’s BWARA alternative which includes a key, 70 year old the line crossing the Mississippi River that is only five years away from mandatory replacement. The Petitioners are considering this line as an “avoided” transmission upgrade of the CHC Project even though the BWARA component is scheduled for rebuilding as little as one year after CHC would be placed in-service.

In his Direct, Mr. Ellis refers to an *undated* (2011?), unnamed and un-submitted, “reliability analysis” involving “steady state analysis of thermal loading and voltages” which found “weaknesses” between the 345 kV lines west of the Mississippi River and the 345 kV lines in central Wisconsin.⁴² Is the twin to the CHC Project, Badger-Coulee now filling this gap? No doubt adding a 345 kV line between any two 345 kV systems, anywhere, “strengthens the overall transmission system and increases its ability to serve load under contingency conditions.”⁴³ Interestingly, the “weaker” lines Ellis cites without specifying names point strongly to BWARA components, “four existing 115kV and 161kV Mississippi River crossings, and a number of overloads on lower voltage facilities across southern Wisconsin”⁴⁴ Ellis explains that MISO investigated these as low voltage transmission alternatives for the CHC Project , “This solution included rebuilding the underlying 138 and 161 kV lines in the northeastern Iowa,” but explains that, “These projects were ultimately rejected because the costs were expected to be near to or greater than the proposed project costs and these projects would provide fewer long-term economic and reliability benefits.”⁴⁵ MISO seems to have analyzed key, if not all components of BWARA in examining Low Voltage Alternatives for the CHC Project. Ms. Klopp cannot determine if there is a Low Voltage Transmission Alternative in this docket or not..

The timing and purpose of a reliability assessment can support different suggestions. Could the BWARA projects that make up BWARA be responsible for 2016 MISO findings that,

41MISO-Ellis-Direct-17

42MISO-Ellis-Direct-26

43MISO-Ellis-Direct-26

44MISO-Ellis-Direct-28

45MISO-Ellis-Direct-30. 31

“steady-state voltage and transient stability voltage issues under several disturbances around the Hickory Creek substation?”⁴⁶ They certainly are close to each other. The Turkey-River 161 kV sits unattended to while a 161 kV line connecting to it (Lore -Turkey River) was rebuilt within the last few years. Ellis does specify what the simulated “disturbances” in the evaluation are, but the Turkey-River 161 kV line built in 1949 is likely is on the candidate list.

After or as result of this 2016 study Mr. Ellis explains, “In addition, the CHC Project was identified as a solution to these issues such that subsequent generator interconnection studies have included the completion of the CHC Project as a condition for the requested interconnection service of all generators in the electrical vicinity.”⁴⁷ This pre-condition is worth repeating. Following 2016, MISO studies assuming the CHC Project would be built were used to evaluate interconnection of power plants in the electrical vicinity of the CHC Project. Unsurprisingly, these are the same studies⁴⁸ heavily cited by parties supporting the addition of power plants. These parties such as Mr. Craven, observe that these MISO studies, “identify reliability issues the CHC Project would resolve.”⁴⁹ More accurately, the reliability conditions were created by assuming the CHC Project was in the system.

How many additional, wind and solar power plants could BWARA cost-effectively support for \$900,000 compared to the hundreds of millions for CHC? That question should be a “matter of [the] reoccurring review”⁵⁰ conducted by both MISO and the Petitioners. To date, the Petitioners have not considered benefits from BWARA for the proceeding.

V. Non-Transmission Alternatives: Do they Benefit the Public Interest?

What is the importance of considering alternatives in this proceeding? With the changing face of energy that is occurring, investing large sums of ratepayer dollars into infrastructure that has a minimum 40 year debt load without considering innovative or alternate technologies is a

⁴⁶MISO-Ellis-Direct-32

⁴⁷MISO-Ellis-Direct-32

⁴⁸app-exhibit-Craven-1 Revised Direct Exh 1, 2018 revision of DPP-2016-FEB-WEST

⁴⁹CEI-Rebuttal-Craven-3

⁵⁰Rebuttal-MISO-Ellis-9

gamble. Besides the obvious potential economic losses that could occur by ignoring contemporary energy solutions, successful reduction of CO2 is at risk. FERC tariffs dictate, from which generation source the power comes, that ends up in our outlets. What effect does this have on the percentage of renewable generation that actually impacts CO2 emissions? Even with wind generation capacity increasing every year, the percentage of wind generation that reaches our homes and businesses (over the MISO region) is only 8%, up approximately 2% over the years between 2014 to 2017. Ms. Klopp believes, how the market competition rules operate, creates an obstacle to CO2 emission reductions.

One reason to consider alternatives is that it is just good sense. When car shopping, one does not look at just one car? Comparing several options provides perspective to any decision. The Public Interests, as stated by the Dubuque County Resolution⁵¹ and Objector comments, request the Petitioners provide a NTA in their petition based on an equal expenditure as would be required for the project. Statutory authority relating to consideration of alternatives (and related factors) include:

BulletIowa Code 2019 Section § 478.3(2) states “the proposed construction represents a reasonable relationship to an overall plan of transmitting electricity in the public interest” and “The possible **use of alternative** routes and **methods of supply**.”

BulletIowa Code 2019, Chapter 476.53(1) states “It is also the intent of the general assembly to encourage rate-regulated public utilities to consider **altering existing electric generating** facilities, where reasonable, **to manage carbon emission intensity in order to facilitate the transition to a carbon-constrained environment**.”

BulletIowa Code 2019, Chapter 476.53(2) states “The general assembly’s intent with regard to the development of electric power generating and transmission facilities, or the significant alteration of an existing generating facility, as provided in subsection 1, **shall be implemented in a manner that is cost-effective and compatible with the environmental policies of the state**, as expressed in this Title XI.”

To summarize the Petitioners and supporting parties position on alternatives Ms. Klopp offers the following points that have been made in their testimony and concerns she has with

⁵¹ Klopp-Reply-Exhibit-15, Dubuque county Resolution #18-233

them:

The Petitioners contend that they don't need to develop, analyze and compare alternatives to the project for this proceeding because, according to Mr. Eddy "MISO, ITC Midwest and the other co-owners of the Project, Dairyland Power Cooperative and American Transmission Company LLC, have fully evaluated alternatives and concluded that the Project is the best alternative to meet the multiple public policy, generation and reliability needs.⁵²" Mr. Eddy is referring to alternatives presented in the WI CHC proceeding, not in this proceeding. If the Petitioners wish to use the WI CHC information in this proceeding they should present it in their testimony and to the E-22386 docket so that it can be reviewed by the IUB, Parties and the Public. I would note that the claim that alternatives presented in the WI proceeding (proven to be uneconomic), ignores the fact that, in ATC's original NTA, they did not include \$132 million⁵³ in savings from avoided energy use and energy sales from a 30 MW solar facility.

NTA energy savings economic benefits calculations

Applicants' NTA Component	Description	# Units	Avoided or Produced (kWh-year)	Current Rate /Sales Value (kWh)	Lifespan (years)	Average rate lifetime, 2.5% per year inflation, starting in 2023	Additional Savings	Benefit to Cost Ratio
Energy Efficiency Residential LED Bulbs	Household 9.5W LED bulbs, \$1M, 15,000 hrs/ 2 hrs day	117,786	37.00	\$0.14350	20	\$0.2154	\$18,775,995	18.8
Energy Efficiency Commercial LED Bulbs	Applicants' BR30 LED bulbs@\$1M / 960 kWh lifecycle	92,530	48.00	\$0.14350	20	\$0.2154	\$19,135,127	9.6
Residential Solar Arrays	2 MW Total – 5kW (ac) ea. @ 1,577 kWh/kW/year production; \$2.50/W; \$5M investment	400	7,789	\$0.14350	30	\$0.2469	\$23,079,631	4.6
30 MW Solar Array	As utility-scale @ 1,577 kWh/kW/year solar production; \$39M investment	1	46,731,000	\$0.02946	30	\$0.0507	\$71,072,396	1.8
Total							\$132,063,149	

⁵²ITC Midwest Eddy Rebuttal – Page 6 and 7 of 11

⁵³Direct-SOUL-Powers-r2-22

1 The Petitioners characterize energy efficiency (EE) as an insignificant resource because it's not
2 generation. While they see it as a modest and invisible reduction, reducing use only a few
3 percent each year. Over time, and with continued increases in EE, it is currently the most
4 significant factor in CO2 reductions.⁵⁴ Changes in usage over time is evidenced by DPC's use
5 dropping 0.44% per year.⁵⁵

6
7
8 The Petitioners witness, Mr. Goggin suggests that current wind development causes MISO's
9 AAT future to be the most likely. Mr. Goggin's assessment of likely futures, while interesting,
10 overlooks other aspects of the AAT future like accelerated EE,⁵⁶ increases in residential, business
11 and community solar (DG), and other non-wind renewables.

12
13 Have the Petitioners fulfilled the Public Interest stated in the Dubuque County
14 Resolution, the comments of Objectors or the relevant statutory requirements? The Petitioners
15 have not developed, analyzed or compared alternatives to the project, (much less an optimized
16 Non-Transmission Alternative, NTA, which embraces many modern energy technologies into
17 one package), so that it could be reviewed by the IUB, Parties and the Public. If the Petitioners
18 wish to use analysis of alternatives from the WI CHC proceeding, that testimony should
19 introduced in this Iowa proceeding, so that it may inform the record. It is curious that the
20 Petitioners seek to skirt analysis of alternatives when there is 490 MW of Battery Storage and
21 3,044 MW of Solar projects proposed for Iowa from the MISO Queue.⁵⁷

22
23
24

1 54Klopp-Reply-Exhibit-152, Klopp-Reply-Exhibit-153

2 55Klopp-Klopp-Reply-13

3 56Mr. Goggin is aware that, as part to MISO Transmission planning, even under its MTEP17 future, the Advanced
4 Alternative Technologies (ATT), does not incorporate the possibility of states alternatively using funds to accelerate
5 incentives for Energy Efficiency and Distributed Generation like rooftop solar. MISO did not select an option
6 presented by stakeholders forecasting that installations of Distributed Solar would increase substantially from 2017
7 to 2031.

1 57 MISO project numbers: for battery storage, J1285, J1321, J1417, J1435, J1476, J1477, J1478, J1479, for solar
2 projects, J1084, J1131, J1132, J1135, J1174, J1190, J1218, J1284, J1313, J1343, J1344, J1413, J1416, J1438, J1444,
3 J1471, J877, J954, J998, J999, J504 and J524.

State	Project #	Fuel	Summer MW	County	Transmission Owner
IA	J1285	Battery Storage	50	Linn County	ITC Midwest
IA	J1321	Battery Storage	65	Story County	MidAmerican Energy Company
IA	J1417	Battery Storage	75	Worth County	ITC Midwest
IA	J1435	Battery Storage	100	Dubuque County	ITC Midwest
IA	J1476	Battery Storage	25	Union County	ITC Midwest
IA	J1477	Battery Storage	50	Scott County	MidAmerican Energy Company
IA	J1478	Battery Storage	25	Des Moines County	ITC Midwest
IA	J1479	Battery Storage	100	Des Moines County	ITC Midwest
Total			490		
MISO QUEUE: https://www.misoenergy.org/planning/generator-interconnection/GI_Queue/#					

Ms. Klopp replies to Petitioner and supporting parties contentions below:

With respect to rapidly changing energy technologies, Mr. Goggin states “transmission actually protects consumers against the uncertainty and “changing face of generation” that Ms. Klopp identifies by allowing more flexibility in our ability to shift from one generation source to another. The accelerating shift in the generation mix Ms. Klopp identifies—the fact that we are moving away from fossil fuel generation and towards renewable generation—is a primary reason why the Project is needed.⁵⁸” In a related statement, Mr. Eddy proposes “As for her argument about stranded costs, it is vague and lacks substance. Unlike a generator that may be retired and no longer used and useful, once a transmission line is constructed and becomes part of the

⁵⁸ CEI-Rebuttal-Goggin-4

1 electric grid, it will be used for the operational life of the asset, expected to exceed 60 years.⁵⁹

2
3 Ms. Klopp suggests another way one might look at this. HVTL projects are expensive
4 and have many negative impacts to landowners, communities and the environment. Once
5 invested, the Public is on the hook for at least 40 years of increased infrastructure charges on
6 their electric bills. The electricity market will change greatly over the 75 year life of a HVTL.
7 Given that we know energy technology is changing rapidly and that more individuals, business
8 owners and communities are choosing to invest in rooftop solar, embrace EE and load
9 management, over time, might we evolve to where increasingly competitive wholesale pricing
10 may not be nearly as important to consumers as significantly lower system cost charges?
11 Avoiding a significant part of these system costs is already evidenced in behind the meter solar+
12 storage facilities for smaller municipal utilities.
13

14 Mr. Goggin (and the Clean Energy Intervenors) are focused on further increasing the
15 Publics dependency on a market that seems to see no end to adding system costs. They are
16 supporting a traditional energy solution for a future that is likely to be very different. Customers
17 change course very quickly when there's a better bottom line. If (or when) electric rates become
18 increasingly oppressive, people will begin to choose to go off the grid, shifting the utility debt to
19 an ever-diminishing number of ratepayers. This is an example of how a HVTL becomes a
20 stranded asset. In banking on the exported wholesale power business, Iowa would be investing
21 in yesterday's technology to address a future world very unlike today. Change is coming faster
22 than anyone predicted, so proceeding with caution, armed with comprehensive cost and CO2
23 accountability, is essential to making the best choices for Iowa's future. It is for these reasons,
24 that the Petitioners failure to provide analytical evaluations of alternatives, economics, etc. for
25 the project is concerning. Perhaps the Petitioners are concerned that the results of these analyses
26 will not show the project to be the best choice.
27

28 The whole conversation about alternatives, circles around NTA's, so Ms. Klopp would
29 like to look at the subject of NTA's. Because no design and analysis of alternatives was
30 presented to this proceeding by the Petitioners, Ms. Klopp would like to review what was
31 presented in the WI CHC proceeding. Ms. Klopp will also respond to comments made by the

1 Petitioners and supporting parties.

2
3 What are Non-Transmission Alternatives (NTA's) and do they address the Public Interest
4 in this proceeding? NTA's combine, conservation, energy efficiency (EE), load management,
5 distributed generation (DG, consisting of on-site residential, business and community solar) and
6 battery storage. How do these features address today's energy issues?⁶⁰ According to a U.S.
7 Department of Energy study, EE is responsible for 51% of all carbon emission reductions.⁶¹ DG
8 is sited at the point of load, reducing the need for transmission. It is paid for by citizens,
9 avoiding system cost increases. NTA's are cost effective because they are credited at the retail
10 rate. NTA's do not carry the negative impacts to landowners, communities and the environment,
11 that HVTLs do.

12
13 How an optimized NTA, designed by a professional can address the types of issues that
14 the project is intended to do is a matter for experts to discuss. Because the Petitioners have put
15 forward no analysis of alternatives, no NTA or low voltage options, etc., there is no information
16 in docket E-22386 to discuss. Because alternatives to the CHC project were: presented in WI;
17 discussed by experts and non-experts; and have been referenced in rebuttal testimony in this
18 docket;⁶² I would like to provide an overview of what was presented there, for the benefit of the
19 record and in response to Mr. Goggins claims below. What are the alternatives to the CHC
20 project that were presented in the WI CHC proceeding?⁶³

1 60 Klopp-Reply-Exhibit-15 Page 2 of 3 Dubuque County Resolution #18-233 Requesting Cost-Benefit Analysis of
2 Non-Transmission Alternative, Adopted August 13, 2018

3 61 Klopp-Reply-Exhibit-152

4 62 ITC Midwest Eddy Rebuttal – Page 6 and 7 of 11, CEI-Rebuttal-Goggin-16

5 63 Klopp-Reply-Exhibit-125, page 12 to 16 of 18, Initial Brief-Klopp-12-16

TABLE 4: Components of Bill Powers', \$177 Million Optimized Non-Transmission Alternative

NTA Components	Component Cost (Millions)	Incentive Amount	Number of Participants	Net Savings/Year	Benefit Note
Industrial Load Management Program	\$20.0	\$2,500	200	\$250	150 kW Per Company
Focus on Energy Incentives	\$3.6	various	205,625	\$1	Targeted Rebates to reduce load in needed areas
Residential Solar Installation through Focus on Energy	\$62.7	\$267/kW rebate	40,000	\$674	Net Zero Carbon Homes 6kW Solar
Back-Up & Aggregated 12 kWh Battery Storage for solar installations w/FOE incentives	\$70.5	\$1500 rebate	47,000	\$700	Back-Up Power for Home and Emergency Use
Community Solar Battery Charging Arrays w/ Municipal and Third party Developers (25% leased @ 6K ea.)	\$8.8	\$588	14,894	\$573	6kW Leased Solar Per House
Minster OH Model Municipal Battery+ Storage Facilities – Third Party w/Stacked Investors 350 MWH	\$11.6	None	68,542	~\$170K Per Muni/Year Shared Revenue	3 Hours Peak Use Back-Up Power
One time Investment- >	\$177.1				

Powers NTA – Optimized NTA designed by Mr. Bill Powers - Some of the features of his NTA's are: Net- metered residential and commercial behind the meter (BTM) solar systems that are customer owner, but supported by Focus on Energy incentives; Community solar and battery systems financed using a 'power purchase agreement' (PPA); use of demand response (DR, also known as load management for managing peak demand), as Mr. Powers describes "is actually utilized to increase transfer capacity by decreasing congestion under peak load conditions"; and Energy efficiency. The economic benefits of Mr. Powers \$67 million NTA are \$1,632.5 million with a capacity benefit of 247.7 MW. The economic benefits of Mr. Powers \$177 million NTA are \$4.5 billion with a capacity benefit of 621.7 MW.⁶⁴

Quanta NTA – Optimized NTA, designed by Mr. Chao for Applicants - The Applicants hired Quanta to do a more serious analysis of an optimized NTA, immediately prior to the Party Hearing. Mr. Chao was experienced and efficient, given the amount of time he had to put together his NTA for the Applicants. Regarding Mr. Chao's NTA, "Applicant's witness Dr. Chao

⁶⁴Klopp-Reply-Exhibit-125, page 15 of 18, Initial Brief-Klopp-15

concluded, based on a preliminary analysis, that a non- transmission alternative solution can provide near-identical functionality as the Cardinal Hickory Creek 345 kV transmission line at a significantly lower cost than the Applicant's proposed solution. This conclusion is based on power flow modeling analysis and should be treated as preliminary. Quanta was only commissioned to respond to intervenors' concerns and was not provided with adequate time to run a complete and detailed analysis.⁶⁵ Again the Applicants rejected this NTA, maintaining it was too costly.

Supplemental NTA Solutions

Battery (power/energy capacity)		Energy Efficiency (MW)	Solar (MW)	Cost ¹ (\$M – 2024)	Net Cost ² (\$M – 2024)	PV Cost ³ (\$M - 2018)
1a	118 MW/344 MWh (<3h)	-	-	133	133	88.4
1b	118 MW/472 MWh (4h)	-	-	170	170	113
2a	116 MW/321 MWh (<3h)	20 (<\$344/kW)	-	133	133	88.4
2b	116 MW/464 MWh (4h)	20 (<\$132/kW)	-	170	170	113
3a	114 MW/261 MWh (<3h)	-	15	128	124	85.1 (82.4)
3b	114 MW/456 MWh (4h)	-	15	184	180	122.3 (119.6)
4a	111 MW/215 MWh (<2h)	-	25	129	124	85.7 (82.4)
4b	111 MW/444 MWh (4h)	-	25	194	187	128.9 (124.3)

Table 2: Energy Storage Lifetime O&M Cost Estimates
(111MW/215MWh (<2h duration))

Cost Category	15 Years		40 Years	
	Aggregate ¹ (\$M – Nominal)	Present Value ² (\$M – 2018 PV)	Aggregate ¹ (\$M – Nominal)	Present Value ² (\$M – 2018 PV)
O&M (preventive) ³	48.3	18.8	181.6	32.4
Extended Warranty ⁴	15.2	5.3	70.0	10.0
Initial Capacity Upsizing	11.1	7.4	11.1	7.4
Capacity Augmentation	10.9	4.2	49.7	7.6
Inverter Replacement ⁵	9.0	2.8	37.7	5.0
Battery Replacement	0.0	0.0	121.7	18.1
Decommissioning ⁶	4.5	1.1	26.2	2.4
Energy Consumption ⁷	2.4	0.9	9.7	1.7
Total⁸	101.3	40.5	507.7	84.5

BWARA – Base with Asset Renewal Alternative engineered by PSCW – BWARA is an alternative that PSCW staff put together which apparently flowed naturally from their analysis of project asset renewal. “The application identifies three projected transmission line overloads that are specifically resolved by the proposed project, using NERC and ATC transmission planning criteria. Considering specific, well chosen, asset renewal projects seemed a logical direction to

⁶⁵ Klopp-Reply-Exhibit-125, page 13 of 18, Initial Brief-Klopp-13

pursue. “Rebuilding these circuits with the higher MVA rating would more than double the capacity of the existing river crossing and alleviate the projected overloads and NERC planning violations across these lines. “Thus, the present-value cost of the base with asset renewal alternative to Wisconsin transmission customers is the same as my calculation of the avoided reliability benefits of the proposed Cardinal-Hickory Creek project, which is \$897,474.” This calculation is provided in Ex.-PSC-Vedvik-3.⁶⁶

NA - No Action

NTA – Original Applicant NTA – This NTA was designed by an engineer who was not qualified to design a modern optimized NTA.⁶⁷ The Applicants made it clear that they dismissed energy storage a priori based on assumptions that it would be cost prohibitive.⁶⁸ The Applicants design appeared not to be cost-effective, but had many flaws that potentially led to that conclusion.

LVA -Low Voltage Alternative – The Applicants LVA, which also suffered from design flaws. The Applicants deemed it too expensive as well.

Mr. Goggin suggests “Can the NTAs described by Ms. Klopp replace the CHC Project by providing the same functions? No, they cannot replace a project of this size. Transmission is the only viable solution for moving electricity across geographic space and in sufficient scale to deliver wind generation to load centers in MISO.⁶⁹” Ms. Klopp would like to draw attention to Mr. Goggin’s statement about moving energy across geographic space to move wind energy. Mr. Goggin assumes that catering to every investor that proposes generation is somehow good energy planning that meets the Public Interest. The Petitioners and their supporters endorse a project designed as though the Public has given them a blank check and agreed to “pie in the sky” design criteria. Ms. Klopp finds that any energy plan developed for and paid for by the Public should stand the test of Public review, which this proceeding represents. What is lacking

⁶⁶ Klopp-Reply-Exhibit-125, page 15 to 16 of 18, Initial Brief-Klopp-15-16

⁶⁷ Klopp-Reply-Exhibit-125, page 13 of 18, Initial Brief-Klopp-13, According to DALC/WWF expert, Ms. Cusick “However, the Applicants assigned the task of developing their NTA solution to team members who, based on their own admission, have no experience developing high priority energy resource solutions.

⁶⁸ Klopp-Reply-Exhibit-125, page 13 of 18, Initial Brief-Klopp-13, They incorrectly assumed that 960 MW of energy storage would be required, based on their stated inexperience in developing assumptions regarding the use of energy storage as a solution.

⁶⁹ CEI-Rebuttal-Goggin-8

1 is, that the Petitioners have not presented analyses of important aspects of the project for review.
2 Further, speaking to Mr. Goggin's statement that "Transmission is the only viable solution," I
3 refer him to the PSCW alternative BWARA, detailed above.
4

5 **VII. Conclusion**

6

7 This proceeding is ostensibly about developing a record that provides for the IUB, in
8 depth information about matters that are material to their decision on this project and its
9 relationship to the Public Interest. As a landowner who would be affected, and has spent a
10 significant amount of time and energy educated herself about this project, and networking with
11 other concerned individuals, Ms. Klopp sees many missing pieces to the puzzle.
12

13 The Petitioners have disregarded the Public Interest by not submitting detailed analytical
14 evidence on topics of importance. The Public wants to be sure that the project is economically
15 viable. Ms. Klopp believes that serious doubt has been raised about the projects economic
16 performance in the WI CHC proceeding. If the Petitioners had presented economic analysis to
17 the record for this case, consideration of findings in Wisconsin would not be optional.
18

19 If renewable energy is a goal, the ability for the project to reduce CO2 emissions at a
20 significant rate is essential. Ms. Klopp sees evidence that, even in the face of steady and
21 significant increases in wind generation, the percentage of power being delivered to ratepayers
22 has only increased by 2% over the 2013 to 2017.
23

24 The Public has asked the Petitioners to develop, analyze and compare alternatives to
25 the project, specifically that of a NTA. The Petitioners have refused. Claiming that the question
26 of alternatives has been decided in the Wisconsin CHC proceeding, is problematic at best. There
27 was a flurry of expert testimony on alternatives and NTA's in particular. From Ms. Klopp's
28 vantage point, the project did not present itself well in comparison to possible alternatives.
29 Further, the Petitioners seem to think that the IUB should take the PSCW Decision on the project
30 without question. Ms. Klopp hopes the IUB will use their own sensibilities to come to their own
31 conclusion on how that testimony may or may not apply to Iowa.
32

The Petitioners claim the project is needed to resolve a host of reliability violations, while further inquiry finds that there are only 3 reliability projects and 2 of them are in Wisconsin. Testimony by PSCW engineers revealed an alternative named BWARA borne out of renewal and upgrades to these 3 reliability concerns that provides the essential functions of the project at a cost of only \$900,000.

Ms. Klopp is opposed to the project and asks the IUB to deny the Petition for Franchise.

Respectfully Submitted on November 21, 2019

/S/ *Chris Klopp*

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